

540,555

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
15 July 2004 (15.07.2004)

PCT

(10) International Publication Number  
**WO 2004/059165 A1**

(51) International Patent Classification<sup>7</sup>: **F04B 15/02**  
(21) International Application Number:  
PCT/KR2003/000062  
(22) International Filing Date: 13 January 2003 (13.01.2003)  
(25) Filing Language: Korean  
(26) Publication Language: English  
(30) Priority Data:  
10-2002-0083789  
24 December 2002 (24.12.2002) KR

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

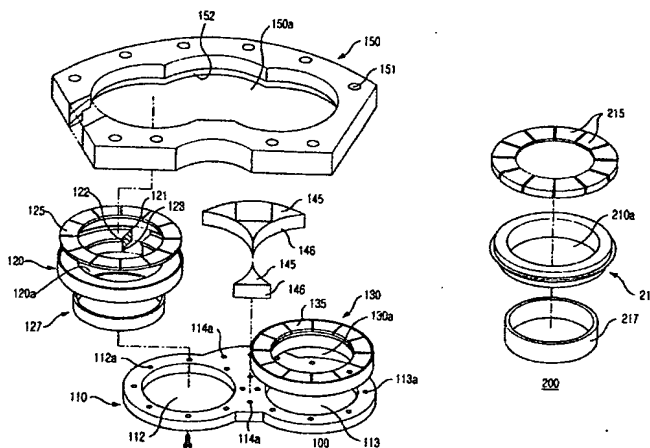
(84) Designated States (*regional*): European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR).

(71) Applicant and  
(72) Inventor: HAN, LackSu [KR/KR]; Daehan-Tungsten, Inc.,  
281 Keumkag-Ri, Seotan-Myun, 451-850 Pyungtaek-Si  
(KR).  
(74) Agent: SHINSUNG PATENT FIRM; Hacheon Bldg.,  
741-40, Yeoksam-dong, Kangnam-gu, Seoul 135-924  
(KR).

Published:  
— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A STRUCTURE AND THE MANUFACTURING METHOD FOR FRICTION PARTS ON CONCRETE PUMP



(57) Abstract: The present invention relates to a sliding motion structure for a concrete pump that can reduce the extent of abrasion and solve the problem of high maintenance expenses resulting from frequency replacement of the sliding motion structure by fabricating friction areas with a plurality of wear-resistant friction blocks, and to a manufacturing method thereof. Also, the sliding motion structure and the manufacturing method thereof can also prevent the internal wall surfaces of the inlet ports and outputs, through which concrete is transferred, from being worn out and prevent the external end of the connecting pipe from being worn out partially. The sliding motion structure of the present research includes a plane fixed member having a wear plate, a pair of coupling tubes, first friction members, and a second friction member; and a ring-shaped movable member having a ring-shaped connecting pipe and a third friction member which is formed of tungsten carbide and connected to the first and second friction members tightly along the ends of the connecting pipe in the same length.

WO 2004/059165 A1